Independent Dance Research Seminar

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2004b

Compositional Techniques for Live Dance in 'Moving' Digital Scenography: presence, sensation and the time-image

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Table of Contents

1   Introduction

1.1   al'Ka-mie Research Aims

Brian Curson and I are al'Ka-mie a company, involved in practical research into compositional approaches for dance, live onstage, within moving digital virtual-environments[1] (VEs). This paper reports on 8 months of research focussing on the technical issues of choreography, specifically the crafting of movement relationships between VEs and live dance and the general composition of the visual and audio elements. This creative work has been significantly influenced by new technological development we are simultaneously making. This research is only the first stage of a longer project and has not been concerned with creating finalised artistic products. Instead we have created a series of three to five minute experiments (or vignettes), and analysed these with respect to whether a single dancer is viewed (by us) as *present*[2] within the VE. Within this process we have used Deleuze's work on rhizomatic structures (1987), sensation (2003) and on cinematic image (1986, 1989) to provide a framework within which to understand our results.

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[1] Virtual environment will be hereafter abbreviated to VE and refers to our technological set-up of projected digitally created scenery, in front of which the dancer performs. Virtual Reality will likewise be abbreviated to VR.

[2] Italicised words in this paper have been given a very specific definition within the body of this work.

al'Ka-mie's original ideal was to have a live dancer seen inhabiting virtual worlds onstage. In previous pieces, 'NT_001454' (2001) and 'Rivan' (2002), our VEs were elaborate and colourful, filling the entire stage area, but we thought the dance and dancer were often overpowered by the VE, and / or the dancer did not appear a part of the VE. Our research has shown that other companies, who have used projected visuals, such as Ultima Vez (2004), Forkbeard Fantasy (2004), Random Dance Company (2003) and Troika Ranch (2003), do not attempt to create the appearance of performers **inhabiting** a virtual world onstage. Rather these companies tend to highlight their performers as distinct entities when moving or dancing onstage. Our current aesthetic, is for the dancer not only to appear to inhabit the VE, but also for the dancer and the moving VE imagery to blur in and out of separate identities in a manner, which suggests that the VE and dancer can effect one another and are part of one another's reality. Our projected image is not to be merely an adjunct explaining in more detail the *narrative*[3]. It is the world in which the dancer's character lives, the *diegetic*[4] world. Our intention is to create onstage a magic of visual illusion.

Our research aims are to:

1) Investigate compositional techniques that allow dancers to appear to **inhabit** a *diegetic* world depicted by the VE, and whereby both dancers and VEs are 'in compositional balance' with one another,

2) Look for techniques where the audience is encouraged to suspend disbelief and feel immersed in the *diegetic* world.

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[3] I use *narrative* loosely within this paper and refer to the perceived interpretation a dancer or viewer places on the whole dance and accompanying sound and visual imagery.
[4] Diegetic refers to the fictional world of a character see also Bordwell (1985).

1.2   <u>The Theory: Aesthetic, Sensation, and Time-Image</u>

These aims do not in themselves define our current aesthetic. This we are clarifying through our research (see also Stuart, Dec. 2003, & March 2004). However, we are aiming for the dancer being seen with a sense of *presence* onstage and yet simultaneously being seen as part of the 'visual pattern' created by the VE image. We have defined our successful experiments[5] (sometimes referred to as vignette[6]) as those in which the dancer is seen[7] as *present* **within** the VE. This holds the sensitive duality we are looking for.

In these successful instances the viewer (Brian or I) also felt immersed within the *vignettes.* This demonstrated a tautology inherent in the investigative structure of our research. The *vignettes* where the dancer was perceived as *present* within the VE were also the most artistically satisfying and complete. When looking for moments, which I felt were artistically complete and with which I resonated, I perceived the dancer as perceived as *present.* In my last paper (Stuart, March 2004) I concluded that this tautology reflected the relationship between *presence* and *sensation[8]* (Kennedy, 2000), or how we view the Artistic Aesthetic. The 'I' of the viewer becomes immersed in the sensation of the filmic-theatrical experience, and through appreciating the aesthetic experience, the viewer finds themselves *present* in the *diegetic* world and yet simultaneously sees the dancer as also *present.*

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[5] *Experiment* here refer to a trial of combined dance and VE within the Full Stage set-up (usually lasting between 3 and 5 minutes) with its own unique set of variables, (see Stuart 2003). From hereon I will refer to a brief sequence of movement within an experiment as movement *'statements'*.

[6] I use *vignette* to refer to our *experiments* when I wish to emphasize the artistic nature of the experiment.

[7] To date, all experimental results are based solely on Brian or I as the viewers.

[8] I am using a Deleuzian (2003) understanding of *sensation* and I interpret it as*: the embodied feelings of a viewer witnessing art.*

Using Deleuzian logic (2003) *sensation* can be related to *presence.* Deleuze suggests that *presence* of a person or thing can act directly on our nervous system (*ibid.* p51) and become, within the aesthetics of art, a form of 'hysterical' force, that is, an intensity of life portrayed and projected by the artwork. Further he suggests that:

> Force is closely related to sensation: for sensation to exist, a force must be exerted on a body, on a point of the wave. But if force is the condition of sensation, it is nonetheless not the force that is sensed, since the sensation "gives" something completely different from the forces that condition it. (*ibid*. p56)

Thus *presence* can be seen as a force, which art might capture and use to promote a form of *sensation* through a viewer's body.

Deleuze sees art as rendering visible not just *presence* but also other invisible forces, such as gravity, pressure, inertia, weight, attraction and time (*ibid.* p63). He suggests that:

> In art, and in painting as in music, it is not a matter of reproducing or inventing forms, but of capturing forces. (*ibid*. p56)

Our work uses a mixture of cinematic elements within our virtual imagery and staged dance or theatre. The cinematic elements, borrow a vocabulary or style derived from contemporary cinema. Deleuze (1986, 1989) focuses on time as a force being rendered visible and manipulated in cinema. He argues

that the cinematic image changed after World War II, from an image in which time is portrayed by movement (the movement-image) toward an image which allows time an independence from movement (the time-image). Thus our combined cinematic-over-live-dance nature of our work has the potential to infuse a Deleuzian time-image into our vignettes.

In this paper, I look at the evolution of this project's experiments and how this might have culminated in a time-image. I also use a Deleuzian theoretical framework to comment on the relationship between *sensation* and *presence* in our work.

1.3 <u>Presence</u>

There is a form of *presence,* which a theatrical performer usually attempts to portray, that is of being larger than life and filling the stage. This is not the definition of *presence* I am invoking, when discussing the *presence* of the performer within our VEs. The Oxford English Dictionary (1999) defines *presence* as 'the state or fact of being present' and *present* as 1. being or occurring in a particular place or 2. existing or occurring now. Albuquerque (2003) in reviewing *presence* notes that feeling or being *present* is currently believed to be mediated by our senses and perceptual processes. VR theorists such as Biocca (1997) and Ihde (2002) take this mediation between our sense of *presence* and our environment further. Specifically they believe that we are altering the way we perceive the world around us to include feeling we are *present* in places where our bodies are not through the

use of technological tools, such as microscopes, telephones, computers, and the cinema. This ease of placing ourselves as *present* in places we are not through technology, is relevant to al'Ka-mie's work. In this paper, I will use a definition of presence by Lombard and Ditton (1997), which most VR researchers apply:

> presence: the perceptual illusion of nonmediation. The term "perceptual" indicates that this phenomenon involves continuous (real time) responses of the human sensory, cognitive, and affective processing systems to objects and entities in a person's environment. An "illusion of nonmediation" occurs when a person fails to perceive or acknowledge the existence of a medium in his/her communication environment and responds as he/she would if the medium were not there. Although in one sense all of our experiences are mediated by our intrapersonal sensory and perceptual systems, "nonmediated" here is defined as experienced without human-made technology.

Much of VR research is concerned with making the virtual emulate physical reality as closely as possible. Reaney (1999) in his work combining VEs with dramatic theatre noted that audiences do not necessarily feel more engaged by a production with highly realistic VEs compared to a production where the VEs reflect the protagonist's emotional state or thoughts. al'Ka-mie may not need to create physically realistic virtual scenography to persuade a viewer to sense a dancer as *present* in a VE. We have focussed on creating *moving*[9] scenography with cinema-like editing, rather than realistic scenography. Dillon et al. (2000) note that research finds that moving images gain stronger physiological responses in viewers than still images, and that

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[9] By *moving* scenography/VE I mean the seeming navigation through a virtual world model as projected on a screen. It does not refer to movement of the projected image around the real environment.

they also increase subjective ratings of *presence*. In using moving VEs we hope to draw the viewer into a bodily sensation of immersion in the diegetic world, but particularly through the character's emotive state and perspective.

In summary, we are looking for the viewer to perceive the dancer as *present* within a VE, and to feel *present* within the *diegetic* world. Our current research is finding that these two *presences* appear dependent upon each other (Stuart, March 2004), consequently when referring to these presences simultaneously I will refer to *dual presence*. Our research is not designed to analyse the meaning of *presence*, rather we use *presence* as a tool to focus our research. However the understanding of *presence* may be broadened through our work.

2   History of Experiments:

2.1   Rhizomes

In my previous paper (Stuart, March 2004), I placed our experimental results within a Deleuze and Guattari (1987) rhizomatic framework. Our rhizomatic elements are: virtual choreography (*Vc*)[10], physical choreography (Pc)[11], music, model, *narrative* (or 'emotive mood'), and costume. Our results

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[10] From hereon movement of the virtual environment or rather navigation through the VE model will be called Vc (virtual choreography) whether on not the movement was improvised or set.

[11] From hereon movement of the dancer will be called Pc (physical choreography) whether on not the movement was improvised or set.

support the notion that these elements are highly interdependent and elude simple linear relationships. Varying any single element (along a 'line of deterritorialization') does not create a linear change. Deleuzian plateaus might refer to the manner in which these elements fit together within a *vignette*, that is their relations effect their expression. The plateaus and rhizomes of relationship are perceived and understood by viewers from within the whole of a Deleuzian machinic assemblage. *Dual presence* occurs for particular combinations of these elements, when they rise into a plateau to become something more than their elements. I will refer to these combinations as those, which *worked[12]*. In the following, I discuss the evolution of our research and thinking, while simultaneously discussing how these elements inter-relate to support *dual presence*.

The technological set-up and methods involved in our experiments are described in Stuart (2003 & March, 2004).

2.2   Phase 1: Planar movement and Linear Thinking:

September '03-November '03

Our initial research reflected a linear approach. We believed we could define 'rules' of movement that would enhance *dual presence*, in a similar manner to early cinema for audience engagement (Bordwell, 1985, 1997). Consequently initial research investigated simple relationships between Vc

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[12] From hereon I use *worked* as an abbreviation for finding the dancer as present within the VE.

and Pc, such as working with a range of planar VE-movement and pedestrian dance.

Models with strong structural clues to suggest movement on a plane (Graveyard) or a textured floor plane (Temple) gave a stronger suggestion of *dual presence* with a spatially realistic relationship of Vc with pedestrian Pc, than models with a statue in space. Models which lacked such spatial clues (statues in space) supported *dual presence* more easily with danced Pc.

 Realistic spatial Vc could be divided into following the location only, or orientation only, or direction only of the dancer. All of these forms of Vc could *work* giving weird 'Alice-Wonderland-like' effects. Also the viewer's perception of distance travelled or size of the dancer was distorted if the VE was moved in a counter-wise or sympathetic manner to the dancer's movement (see Stuart 2003). Thus, the virtual image affected the viewer's perception of the real image. Further, the mode in which the Vc related to the Pc could be easily switched between, without disrupting a viewer's sense of *dual presence*. In all of these examples, the viewer's body accepts an active role in their voyeurism. If to maintain realism, a viewer would have to physically move to see a particular perspective, then often we found that there was a relevant movement sensation in the viewer's body. We believe that the viewer's body may sympathise with the movement of the virtual camera, which navigates the VE. Thus, if the viewer feels *present*, the viewer's *sensation* of *presence* within the diegetic world may come foremost through the navigated path of the Vc (defined by the virtual camera), than

through the dancer's physical movements. This more closely resembles cinema, than typical dance performance.

Costume colour did affect *presence* of the dancer (in the VE). Generally white, black or a colour similar to the VE *worked*, regardless of whether the movement was pedestrian or 'dance'.

Music did not significantly effect whether the experiment *worked* or not in this phase.

This planar movement gave a very realistic interpretation of the Vc-Pc relationship, but not all models supported this. Contemporary dance gives space for metaphoric or emotional interpretation of an artistic work. Our next phase began as we navigated out of the Planar and into 3D space, allowing the dance to explore a wide range of non-realistic relationships to the VE.

2.3   Phase 2: Dance and VE Improvisation in different VE Models :

November '03 – January '04

In this second phase of our research we 'flew' through the model navigating it in a continuous 3D path. The dance was improvised with minimal structure. The VE models' different characteristics continued to influence our results. For example, the Stairs model has many perspective lines, but without a prominent ground plane. When flown through, the Stairs appeared to travel through space, moving closer or further from the viewer. In contrast, when

'flying' through the Graveyard model, which has prominent clues indicating a ground plane, the crosses appeared to shrink (becoming like a swarm of insects) or grow in relation to the dancer, rather than appearing to travel through space maintaining their size. However it is important to understand that these interpretations are also a function of the transforms we were using to navigate the models through virtual space.

When we 'flew' the Vc, a white costume colour was most likely to *work*. However, an underlying narrative in the vignette could justify a different colour.

In contrast to phase one, music influenced both the Vc and the Pc, giving a baseline relationship (whether lyrics or the rhythm and dynamics followed, or a mood shared). Generally, the experiments, which *worked* tended to have a *narrative* whether abstract or literal, which was fostered by the music. Investigating relationships between music and the Vc led to the realization that a new transformation for model movement was needed, that of sharp staccato movement.

In this phase we discovered many interesting relationships between the elements involved by improvising. But, as we were still unclear as to how the elements related to each other in order for them to work as a whole, in the next phase we narrowed down our focus to one model.

2.4 Phase 3: The Stairs model, flying and programming:

January '04 – March '04

In this third phase, we concentrated on The Stairs model, and followed strategies for improvisation of Pc and Vc.

At this point the degree to which the creative research, and our technological development and set-up are entwined became very apparent. For instance, the choice of joystick transform (the set of mathematical equations) that relate the movements of the joystick(s) to the movement of the virtual camera, supports different types of Vc movement and hence a viewer's sensation. Indeed by using a joystick as a navigation device, this favours a cumulative fluid dynamic, which in turn affects the whole viewing of the vignette. As we continue our research we make continual technological modifications required to further the creative process. The technology is a part of the evolving whole. Our ideas initiate the technological change, which facilitate further discovery, which in turn leads us to further technological development. For example, in phase 5, when we gained the ability to cut between different models or perspectives of the same model, we discovered new relationships between the Vc and Pc. This change was so radical, I liken it to switching from Deleuze's cinematic movement-image(1986) to cinematic time-image (1989).

In this phase we played with various strategies in our experimental approach, for example the Pc switched between highly structured and 'free'

improvisation. We played with: following movement paths, listening to the same or different music, the Vc operator not looking at the set, having the Vc operator direct the dancer, the dancer following a tight score, working with a select set of music, switching roles of Vc or Pc improviser, changing costume. We would usually conduct a series of experiments on the particular variable we were researching, before switching to investigate a new variable. We also looked for results of one series of experiments affecting those of the other series of experiments.

The costume *worked* when it was not only white, but also involved the sleek lines of a unitard. A dress or skirt seemed to confuse the viewer's perception of the dancer as *present* in a diegetic world, as the projected image played across the costume. In these costumes, the VE was more likely to be seen as an artistic adjunct to the visual presentation of set and costume, than a diegetic world. But as for all 'rules' this could alter depending upon the assemblage as a whole, and in particular the lighting.

Generally the experiments with more structured improvisation did not *work*. Perhaps this was because the structure inhibited the dancer in finding a clear movement relationship and 'narrative' with both Pc and music simultaneously. Upon returning to free improvisation, we found we were creating a very strong series of experiments with *dual presence*. I believe that our intuitive brains (Claxton, 1998) had learned many relationship possibilities from our structured improvisation.

When the Pc, Vc and music related strongly together, a *narrative* was easily placed by the viewer over the resulting work; or perhaps when the dancer had a clear *narrative* relationships between Vc and Pc and music were more easily formed. To understand the specific role of *narrative* in finding *presence* we need to conduct further research.

The mode of the Vc-Pc relationship did not have to be consistent through an experiment, but mode changes *worked* best if they occurred simultaneously with music or Pc changes (the general timing and rhythm of mode changes was also important). The experiments, which did not *work*, often had mode changes without 'justification' (and unclear rhythm to their occurrence). The experiments, which *worked*, had multiple nuances in the relationships between elements.

In this phase we realised that linear logic and linear relationships were not applying to our results, which led us to use Deleuze and Guatari's rhizomic networks (see p 10. & figure 1). Further, in attempting to clarify causal relationships between the elements, I realised that the structure of my research held a tautology (see p5.) which upon investigation led to the idea of *sensation* being related to *presence*(Deleuze 2003, Kennedy 2000, Stuart, March 2004). These were germs of understandings that influenced us to look again at our early results and reflect on how we could create *presence* **consistently**, **choreograph** intricate Vc and Pc relationships, and **define** our artistic product and its *sensation*.

Figure 1.

Within-Vignette Relationships of the Elements- Simplified

2.5 Phase 4: Re-creating 2 Vignettes:

March '04

We chose 2 vignettes one with The Stairs and one with The Graveyard, both which *worked* and were seemingly simple to recreate. In both of these sequences the dancer appeared to melt into and out of the projected imagery and yet maintained a sense of being *present* within the VE. However, it proved extremely difficult to recreate the Vc and the nuances of timing between the Vc-Pc. This process highlighted the importance of **nuances and timing** in relationships not just gross patterns in Vc-Pc, in order to create the atmosphere for *presence* to emerge (see Stuart, March 2004).

We developed software to record Vc as we improvised it, edit these recorded movements, and replay them on various cues. We also developed the facility to cut between different perspectives of a model.

We then had another profound revolution of thought. Cutting between Vc images could be done in a manner similar to cinema, where the edited structure can give a Deleuzian time-image (1989). This time-image possibility gave a stable framework for the particular choreographic structure I had been aiming for. A time-image may not be the result, but **now** choreographic structure need not be the typical: within-scene continuous unfolding of movement with grossly spaced between-scene changes created by entrances/exits, props changes, costume changes, lighting-state changes, set changes, or music changes (eg. 'LureLureLure' by Zbang Dance Company (2000); 'Swan Lake' by Adventures in Motion Pictures (1996),

'Naharin's Virus' by Batsheva Dance Company (2004), 'Songs of the Wanderers' by Cloud Gate Dance Theatre (1999), 'The Millennarium' by Random Dance Company (1998). The Pc-Vc relationship and hence Dance could change rapidly and often, easily creating frequent scene changes, as well as mini perspective changes, even while a soloist remains onstage without props. This possibility led to Phase 5

2.6 Phase 5: Vc cutting, a choreographed Pc, and Deleuzian Time-Image:

April '04 – May '04

With new software allowing the Vc to more closely approximate cinema our experimental vignettes can instantaneously change mood or 'narrative statement' many times in quick succession.

To investigate this further I created a five minute Pc sequence, called 'The Typewriter Sequence' (TWsq), which comprised a series of distinctly different movement *statements.* The Vc was improvised to this fixed Pc with a variety of music, and then both music and Pc were set.

For the first time we could repeat a sequence many times successfully. This TWsq was created for experimental purposes and is not a complete artistic product, however it did have an artistic integrity. It gave us a hint of the time-image I was searching for. The sequence starts with walking backwards from stage right to stage left, as the Stairs flow from stage left to stage right. This

gives a greater sense of going back in time, than simply walking backwards without the Vc. The next Pc *statement* flows across the stage several times emulating a typewriter, with the Stairs flowing like paper through the typewriter. This *statement* is repeated later in the sequence, and could be viewed as a letter being written by the character. The rest of the movement *statements* could be viewed as the contents of the letter, or emotional portrayals of an inner state. The flow of the TWsq allows, a series of ideas in very quick succession, to coalesce together in a viewer's mind to create a *narrative* with non-linear time. The *narrative* as in contemporary dance, can still be loosely interpreted, with the viewer's feelings being touched. Perhaps these are not Deleuze time-images (1986, 1989) as they are reliant on movement and the viewer experiencing a subjective sensation. Yet, without the Vc, the time-jumping is not even hinted at. I believe that the image of the TWsq is not based on action-reaction, but rather is much more a sensory visual image. If it is not a time-image it is something close to it, and may with further development become a time-image on stage.

We experimented with altering the costume. The different costumes gave very different 'narratives' to this TWsq sequence. For example, a mini skirt (for me) gave a sense of a contemporary psychological drama, while a fluffy mid-length skirt with embroidered top gave a surreal fantasy image like a Victorian doll. These *narratives* within the costume affected the viewer sensing presence. Thus, this repeatable sequence was still subject to *working* as a whole rather than by parts.

We analysed post facto, the specific Vc-Pc movement relations we had artistically chosen. This revealed that early in the TWsq we tended to use sympathetic movement of the Vc to the Pc. Later in the sequence we used counter-wise Pc-Vc relationships. Why might this pattern *work*? Artistically we wanted to establish the realism of the VE world in the introduction. This is best done with sympathetic movement. Toward the end of the sequence we wanted to promote in the viewer a physical sensation resonating with the character's emotions. This was best done with counter-wise movement where the viewer's sensation is enhanced as the Vc navigation path would mean that the viewer would be moving if this was reality.

We experimented with combining the Maze with the Typewriter Pc. We discovered that improvising thoroughly with the Stairs beforehand was vital to understanding the potential range of images and metaphors we could invoke.

We finally experimented with cutting chronologically between the Graveyard sequence (see section 2.4 Phase 4) with the TWsq. This provided interesting results, which also had the potential of a time-image being developed. We need to do a lot more research, to understand how to portray a complex narrative within this type of cutting.

3 *Presence* **and** *Sensation*

Now, the structure of a 'dance' piece need not be one primarily of fluid transition with occasional dramatic scene change, but can become one with many discontinuous transitions, both within scenes and between scenes. The imagery we are creating now, is not based on an assemblage of elements working in any one moment in time and unfolding gracefully through time as one evolving image. Rather our imagery relies on an assemblage of elements with a complex temporal structure in their relationships. The modes of the relationships can blend into other modes or interrupt each other, or overlay each other, just as in cinema. The viewer senses the movement in the image through their body, particularly identifying their perspective with the virtual camera's perspective (controlled by the Vc path). The Vc path represents the notional physical path of the viewer i.e. their choreography. If the *sensation* becomes engaging or intense, the viewer feels *present* within the diegetic world and in meeting the dancer there, may see the dancer as *present* in the whole temporal assemblage. There are not set moments where the dancer is *present* and then not. There is the whole, which *works* or does not *works* and yet, if it does *works*, there are different levels of artistic satisfaction, just as in any art form.

Sensation alone does not guarantee the viewer sensing the dancer as *present* within the VE. The VE and dance can still be seen as separate elements, just as in most current contemporary theatre. However if the intention of the artwork is the dancer inhabiting the VE world, then a viewer's sensation of the artwork must necessarily come foremost through their

identification with the moving VE (they must sense themselves as the virtual camera, just as a viewer of cinema senses the work through the camera's perspective), rather than primarily through identification with the dancer. But, for the dancer to be seen as *present,* it is not enough for the viewer to simply identify with the perspective given by the Vc. The elements and their relations affect the viewer's (see figure 1.) perception and sensation. If these elements of the rhizomic network are integrated neatly even though complexly and rise into a plateau intensifying sensation, the viewer being drawn into the VE world is likely to see the dancer as *present* within the world.

How is it that I found no instance of *presence* of the viewer in the VE, without *presence* of the dancer? I suspect this is because our creative intention was primarily for the dancer to be seen as *present*, and if this did not happen our artistic product had no other basis from which to have integrity. Also, I believe that as viewers (Deleuze, 2003), our attention is drawn to the human element in a work of art. In our vignettes our attention follows the dancer via the Vc. If the Vc is powerful but the dancer is not *present*, then the viewer may not engage with either. If the viewer is more drawn to the dancer, than the VE world, then the VE becomes a visual prop or set rather than a diegetic world. This idea requires further testing.

4   Conclusion and future Directions

Learning to combine moving virtual scenography and live dance in such a way that an audience senses the dancer as *present* within the virtual world is a complex project, which we are only just at the formative stages. Our artistic images involve variables, processes, and relations, which act together in time and space and are perceived in a concert, with the whole resembling a Deleuzian machinic assemblage (1987). Deleuze notes that:

> We know that things and people are always forced to conceal themselves, have to conceal themselves when they begin. What else could they do? They come into being within a set which no longer includes them, and in order not to be rejected, have to project the characteristics which they retain in common with the set. The essence of a thing never appears at the outset, but in the middle, in the course of its development, when its strength is assured. (1985, p3.)

We believe that combined dancer-in-VE image will evolve over time. I suspect that Brian and I will see an even greater potential of this combined medium as we continue to work with it. Also, viewers may need to be slowly educated in reading more complex relationships between the Vc and the Pc, just as has occurred with the cinematic image (Bordwell, 1985).

In the immediate future, this research project is to last another 7 months. We hope to create an artistic product by the end of this period, but the next stage of research continues to focus on the technical aspects of crafting imagery

with the dancers as *present* in the VE. This early stage of our work has involved quite basic problem solving. Brian continues to spend much time solving technological problems and developing new software. To date, I have been the dancer, which has given me valuable insight into the intuitive creative side of our research and allowed us to discover images we could not have consciously created. However I now need to see from outside the images we are creating and be able to direct them more consciously. Hence, we are starting to work with other dancers. We are also aware that as yet, only Brian and I are viewing and interpreting our results. We intend to create a series of moving vignettes, and invite a range of viewers to discuss their perceptions. Finally, we are particularly interested in pursuing research into crafting time-images, cutting between models, developing narratives and increasing the interactive component of the work.

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